The Valuemetric

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Creating a “Valuemetric”

Value of higher education is multifaceted, not just about earnings: this study combines quantitative and qualitative benefits into one “Valuemetric”

Sources of Data

- American Community Survey – 2019 (approximately 2.1 million records)
- Current Population Survey – Multiple samples from 2018 and 2019 (approximately 110,000 records)
- General Social Survey – 2016 (approximately 1,300 records)
- CDC – 2019 mortality multiple cause file – (2.8 million records)

Note: All data for the US
Valuematic Dimensions and Variables

The Valuematic is a qualitative and quantitative measure with five dimensions – each of which have four variables – that indicate value relative to educational attainment.
1. Converted all Valuemetric variables into “standard scores” – stated as standard deviations from the mean
   • This allows for “apples to apples” comparisons of variables and for combination of variables into indexes (indexes created by averaging the “standard scores”)

2. Broke the data into 4 education cohorts
   • No degree
   • Associates Degree
   • Bachelors Degree
   • Advanced Degree

3. Compared the Valuemetric across the 5 dimensions and compared them over the 4 education cohorts
Overall Index of Value of Higher Education
(Combination of all Variables)

The 0.00 line is the mean. Positive values are an index value greater than the population average. Negative values are an index value lower than the population average.

Across the spectrum of factors more education results in a higher Valuemetric score.

Americans with a bachelors degree score approx. 2x higher on the Valuemetric compared to those with no degree.

The 0.00 line is the mean. Positive values are an index value greater than the population average. Negative values are an index value lower than the population average.
Radial Graph Reading

- The 0.0 contour (dotted line) is the mean – the national average for the given Dimension or Variable.
- The contours are scaled as standard deviations above or below the national average.
- Points outside the 0.0 contour identify education cohort scores *above* the national average and inside the 0.0 contour identify cohort scores *below* the national average.
- The further out on the graph, the higher the score.
Valuing an Academic Degree by Major Dimension

More education results in a higher Valuemetric score even when drilling down into individual dimensions.
Valuing an Academic Degree by Major Dimension

Economic by Individual Variables

- **Earnings**:
  - No Degree: -0.24
  - Associates Degree: -0.09
  - Bachelors Degree: 0.24
  - Advanced Degree: 0.62

- **Employment Status**: Mean
  - No Degree: -0.06
  - Associates Degree: 0.02
  - Bachelors Degree: 0.06
  - Advanced Degree: 0.09

- **Labor Force Status**: Mean
  - No Degree: -0.15
  - Associates Degree: 0.07
  - Bachelors Degree: 0.18
  - Advanced Degree: 0.21

- **Poverty Status**: Mean
  - No Degree: -0.15
  - Associates Degree: 0.10
  - Bachelors Degree: 0.17
  - Advanced Degree: 0.24

*Wage and Salary Earnings; Employed or not; In the Labor Force or not; Above or below poverty line*
Valuing an Academic Degree by Major Dimension

**Average age of Death**

- No Degree: -0.03
- Associates Degree: -0.07
- Bachelors Degree: 0.11
- Advanced Degree: 0.22

**Health Insurance Status**

- No Degree: -0.13
- Associates Degree: 0.06
- Bachelors Degree: 0.14
- Advanced Degree: 0.23

**Food Security**

- No Degree: -0.17
- Associates Degree: 0.01
- Bachelors Degree: 0.21
- Advanced Degree: 0.28

**Access to vehicle(s)**

- No Degree: -0.03
- Associates Degree: 0.11
- Bachelors Degree: 0.05
- Advanced Degree: -0.03

*Average of the ages of death reported on the death certificates; Had health insurance coverage or not; Level of food security; Number of cars available to household members*
### Civic/Social by Individual Variables

#### Voter Participation

- No Degree: 0.24
- Associates Degree: 0.10
- Bachelors Degree: 0.25
- Advanced Degree: 0.35

#### Voter Registration

- No Degree: 0.22
- Associates Degree: 0.22
- Bachelors Degree: 0.24
- Advanced Degree: 0.24

#### Attended Movies

- No Degree: 0.25
- Associates Degree: 0.08
- Bachelors Degree: 0.29
- Advanced Degree: 0.34

#### General Happiness

- No Degree: -0.08
- Associates Degree: -0.14
- Bachelors Degree: 0.19
- Advanced Degree: 0.14

Voted in last election or not; Registered to vote or no; Attended movies in last year or not (proxy for recreational amenities); Self reported happiness scale
Valuing an Academic Degree by Major Dimension

More education results in a higher Valuemetric score even when drilling down into individual dimensions.

- Occupational Prestige
- Job Tenure
- Career Satisfaction
- Travel time to work

A constructed variable that assigns a prestige score to each occupation using the occupational classification; Years at current job; Self reported career satisfaction scale; Minutes it takes to get to work.
Valuing an Academic Degree by Major Dimension

Home by Individual Variables

- **Housing Mobility**
  - No Degree
  - Associates Degree
  - Bachelors Degree
  - Advanced Degree

- **Doubling up - subfamily count**
  - No Degree
  - Associates Degree
  - Bachelors Degree
  - Advanced Degree

- **Home Ownership**
  - No Degree
  - Associates Degree
  - Bachelors Degree
  - Advanced Degree

- **Access to Internet**
  - No Degree
  - Associates Degree
  - Bachelors Degree
  - Advanced Degree

Years at current address; Number of discrete subfamilies living with the primary family in the housing unit; Own your house or not?; Access to the internet or not?